

A meta systematic review of artificial intelligence in higher education: a call for increased ethics, collaboration, and rigour

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Abstract

Although the field of Artificial Intelligence in Education (AIEd) has a substantial history as a research domain, never before has the rapid evolution of AI applications in education sparked such prominent public discourse. Given the already rapidly growing AIEd literature base in higher education, now is the time to ensure that the field has a solid research and conceptual grounding. This review of reviews is the first comprehensive meta review to explore the scope and nature of AIEd in higher education (AIHEd) research, by synthesising secondary research (e.g., systematic reviews), indexed in the Web of Science, Scopus, ERIC, EBSCOHost, IEEE Xplore, ScienceDirect and ACM Digital Library, or captured through snowballing in OpenAlex, ResearchGate and Google Scholar. Reviews were included if they synthesised applications of AI solely in formal higher or continuing education, were published in English between 2018 and July 2023, were journal articles or full conference papers, and if they had a method section 66 publications were included for data extraction and synthesis in EPPI Reviewer, which were predominantly systematic reviews (66.7%), published by authors from North America (27.3%), conducted in teams (89.4%) in mostly domestic-only collaborations (71.2%). Findings show that these reviews mostly focused on AIHEd generally (47.0%) or Profiling and Prediction (28.8%) as thematic foci, however key findings indicated a predominance of the use of Adaptive Systems and Personalisation in higher education. Research gaps identified suggest a need for greater ethical, methodological, and contextual considerations within future research, alongside interdisciplinary approaches to AIHEd application. Suggestions are provided to guide future primary and secondary research.